

CLAIMS

I claim:

1 1. A computerized method for determining the optimum strategy
2 for controlling pollutant emissions from an electric power
3 generating plant, the method comprising the steps of:

4 providing a historical data base for the electric power
5 generating plant;

6 providing real time data;

7 predicting projected power generation requirements for a user
8 specified future time period by using the historical data base and
9 the real time data;

10 calculating a baseline projected emission rate for each
11 pollutant over the user specified future time period using the
12 projected power generation requirements;

13 displaying the baseline projected emission rate for each
14 pollutant over the user specified future time period to a user;

15 displaying a pollutant emission limit for each pollutant over
16 the user specified future time period;

17 displaying a list of pollution control options to the user;

18 calculating a projected emission rate for each pollutant over
19 the user specified future time period for a user selected pollution
20 control option; and

21 displaying the projected emission rate over the user specified
22 future time period for the user selected pollution control option.

2. The computerized method of claim 1, wherein said step of providing a historical data base includes providing information as to hourly power generated, hourly amounts for each pollutant emitted, operating parameters of the electric power generating plant for each data point in the historical data base, and the type of fuel used for each data point in the historical data base for a first one year period.

3. The computerized method of claim 1, wherein said step of providing real time data includes providing data on current power output, current emission rate for each pollutant emitted, current operating parameters of the electric power generating plant, and current type of fuel being used.

4. The computerized method of claim 1, wherein said steps of displaying the baseline projected emission rate, displaying a pollutant emission limit, and displaying the projected emission rate include displaying on a graph for each pollutant.

5. The computerized method of claim 1, wherein said steps of predicting projected power generation requirements, calculating a baseline projected emission rate, displaying the baseline projected emission rate, displaying a pollutant emission limit, displaying a list of pollution control options, calculating a projected emission rate, and displaying the projected emission rate are performed by a computer having a display screen.

1 6. A method for determining the optimum strategy for
2 controlling pollutant emissions from an electric power generating
3 plant, the method comprising the steps of:

4 providing a historical data base for the electric power
5 generating plant including hourly power generated, hourly amounts
6 for each pollutant emitted, operating parameters of the electric
7 power generating plant for each data point in the historical data
8 base, and type of fuel used for each data point in the historical
9 data base for a first one year period;

10 providing real time data including current power output,
11 current emission rate for each pollutant emitted, current operating
12 parameters of the electric power generating plant, and current type
13 of fuel being used;

14 predicting projected power generation requirements for a user
15 specified future time period by using the historical data base and
16 the real time data;

17 calculating a baseline projected emission rate for each
18 pollutant over the user specified future time period using the
19 projected power generation requirements;

20 displaying the baseline projected emission rate for each
21 pollutant over the user specified future time period to a user, the
22 baseline projected emission rate being displayed in a graph for
23 each pollutant;

24 displaying a pollutant emission limit for each pollutant over
25 the user specified future time period on the graph for each
26 pollutant;

27 displaying a list of pollution control options to the user;
28 calculating a projected emission rate for each pollutant over
29 the user specified future time period for a user selected pollution
30 control option; and
31 displaying the projected emission rate for each pollutant over
32 the user specified future time period for the user selected
33 pollution control option on the graph for each pollutant, said
34 steps of predicting projected power generation requirements,
35 calculating a baseline projected emission rate, displaying the
36 baseline projected emission rate, displaying a pollutant emission
37 limit, displaying a list of pollution control options, calculating
38 a projected emission rate, and displaying the projected emission
39 rate being performed by a computer having a display screen.

1 7. A system for determining the optimum strategy for
2 controlling pollutant emissions from an electric power generating
3 plant, the system comprising:

4 at least one continuous emission monitoring device positioned
5 proximate a site of pollutant emission within the electric power
6 generating plant;

7 means for measuring power output from the electric power
8 generating plant;

9 a computer system having memory means, processor means,
10 display means, input means, first communication means communicating
11 with said continuous emission monitoring device, and a second
12 communication means communicating with said means for measuring
13 power output;

14 a historical data base for the electric power generating plant
15 including hourly power generated, hourly amounts for each pollutant
16 emitted, operating parameters of the electric power generating
17 plant for each data point in said historical data base, and type of
18 fuel used for each data point in said historical data base being
19 stored in said memory means for a first one year period;

20 real time data including current power output, current
21 emission rate for each pollutant emitted, current operating
22 parameters of the electric power generating plant, and current type
23 of fuel being used, being received from said continuous emission
24 monitoring device and said means for measuring power output and
25 being stored in said memory means on a continuing basis;

26 said memory means also storing a control program which
27 operates said processor means;

28 said processor means operating to predict projected power
29 generation requirements for a user specified future time period by
30 using said historical data base and said real time data;

31 said processor means operating to calculate a baseline
32 projected emission rate for each pollutant over the user specified
33 future time period using said projected power generation
34 requirements;

35 said processor means operating said display means to display
36 said baseline projected emission rate for each pollutant over the
37 user specified future time period to a user, said baseline
38 projected emission rate being displayed in a graph for each
39 pollutant;

40 said processor means operating said display means to display
41 a pollutant emission limit for each pollutant over the user
42 specified future time period on said graph for each pollutant;

43 said processor means operating said display means to display
44 a list of pollution control options to the user;

45 said processor means operating to calculate a projected
46 emission rate for each pollutant over the user specified future
47 time period for a user selected pollution control option; and

48 said processor means operating said display means to display
49 said projected emission rate for each pollutant over the user
50 specified future time period for the user selected pollution
control option on said graph for each pollutant.